

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for sterilizing a material ~~comprising at least one desired macromolecule~~, the method comprising:
providing said material at an initial pressure; and
while maintaining said material in a temperature range that is below 45°C,
increasing the pressure to an elevated pressure, then decreasing the pressure below the elevated pressure, and cycling the pressure between a decreased pressure and the elevated pressure at least two times, ~~sufficient to sterilize the material but insufficient to irreversibly inactivate the biological activity of said desired macromolecule~~, thereby providing a sterilized material.

2. (Original) The method of claim 1, wherein the material is provided at an initial pressure of about 1 atm.

3-5. (Canceled).

6. (Original) The method of claim 1, wherein the elevated pressure is in the range of about 5,000 psi to about 120,000 psi.

7. (Original) The method of claim 1, wherein the desired biomolecule is selected from the group consisting of nucleic acids, proteins, lipids, carbohydrates, drugs, steroids, and nutrients.

8. (Canceled)

9. (Currently Amended) The method of claim 1, wherein the pressure is cycled further comprising decreasing the pressure to a decreased pressure, and cycling the pressure between the decreased pressure and the elevated pressure at least ten times.

10. (Currently Amended) The method of claim 1 ~~[[8]]~~, wherein the decreased pressure is half of the elevated pressure or less.

11. (Original) The method of claim 1, further comprising warming or cooling the material prior to the pressure-increasing step.

12. (Original) The method of claim 1, further comprising warming or cooling the material after the pressure-increasing step.

13. (Original) The method of claim 1, wherein the material being sterilized is selected from the group consisting of a biological sample; blood plasma, serum, or other plant, animal, or human tissue; feces; urine; sputum; medical or military equipment; a foodstuff; a pharmaceutical preparation; ascites; and a vaccine.

14. (Currently Amended) The method of claim 1, wherein the material being sterilized is initially contaminated with at least one of ~~a bacterium~~, a prion, a virus, a fungus, a protist, a nucleic acid, and a protein.

15-31. (Canceled).

32. (New) The method of claim 1 in which the sterilized material comprises a desired macromolecule.

33. (New) The method of claim 14 in which the sterilized material comprises a desired macromolecule.

34. (New) The method of claim 32 in which the desired macromolecule has a biological activity that is maintained in the sterilized material produced by the method.

35. (New) The method of claim 32 in which the macromolecule is a protein.

36. (New) The method of claim 32 in which the infectious agent is a virus.

37. (New) The method of claim 1, wherein the elevated pressure is in the range of about 2,000 psi to about 120,000 psi.